

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

FORM APPROVED  
OMB NO. 1004-0136  
Expires: November 30, 2000

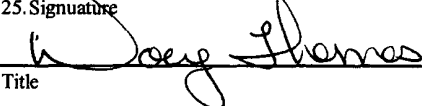
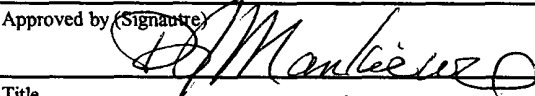
APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of Work <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. <b>Jicarilla Contract 117E</b>	
1b. Type of Well <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other <input type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name <b>Jicarilla Apache</b>	
2. Name of Operator <b>Energen Resources Corporation</b>		7. Unit or CA Agreement Name and No.	
3a. Address <b>2198 Bloomfield Highway Farmington, New Mexico 87401</b>		8. Lease Name and Well No. <b>Jicarilla 117E 3B</b>	
3b. Phone No. (include area code) <b>(505)325-6800</b>		9. API Well No. <b>30-039-292916</b>	
4. Location of Well (Report location clearly and in accordance with any State requirements)* At surface <b>1900' FSL, 660' FWL</b> At proposed prod. zone		10. Field and Pool, or Exploratory <b>Blanco Mesaverde</b>	
14. Distance in miles and direction from nearest town or post office* <b>12 miles northwest of Lindrith, New Mexico</b>		11. Sec., T., R., M., or Blk. and Survey or Area <b>1/4 Sec. 34, T26N, R03W - NMPM</b>	
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drg. unit line, if any) <b>660'</b>		12. County or Parish <b>Rio Arriba</b>	
16. No. of Acres in lease <b>2560</b>		13. State <b>NM</b>	
17. Spacing Unit dedicated to this well <b>320 W/2</b>		18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. <b>1700'</b>	
19. Proposed Depth <b>6571'</b>		20. BLM/BIA Bond No. on file	
21. Elevations (Show whether DF, KDB, RT, GL, etc.) <b>7414'</b>		22. Approximate date work will start* <b>10/04</b>	
23. Estimated duration <b>10 days</b>			

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, shall be attached to this form:

- |   |  |
|---|--|
| 1. Well plat certified by a registered surveyor.  | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).    |
| 2. A Drilling Plan  | 5. Operator certification.   |
| 3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office). | 6. Such other site specific information and/or plans as may be required by the authorized officer. |

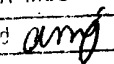
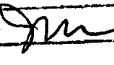
25. Signature 	Name (Printed/Typed) <b>Doug Thomas</b>	Date <b>12/19/03</b>
Title <b>Drilling &amp; Completion Foreman</b>		
Approved by (Signature) 	Name (Printed/Typed) <b>AFM</b>	Date <b>1/10/06</b>
Title <b>PFO</b>		

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.  
Conditions of approval, if any, are attached.

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

\*(Instructions on Reverse)



AFMSS	
Adj'd	
Engr	
Geol	
Surf	
Appvl	

NMOCD

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BLM  
03 DEC 24 AM 9:50  
BLM  
10 ALBUQUERQUE, N.M.

District I  
PO Box 1980, Hobbs, NM 88241-1980

District II  
PO Drawer DD, Artesia, NM 88211-0719

District III  
1000 Rio Brazos Rd., Aztec, NM 87410

District IV  
PO Box 2088, Santa Fe, NM 87504-2088

State of New Mexico  
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION  
PO Box 2088  
Santa Fe, NM 87504-2088

Form C-102

Revised February 21, 1994

Instructions on back

Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number 30-039-29296	*Pool Code 72319	*Pool Name BLANCO MESAVERDE
*Property Code 21943	*Property Name JICARILLA 117E	*Well Number 3B
*GRID No. 162928	*Operator Name ENERGEN RESOURCES CORPORATION	*Elevation 7414'

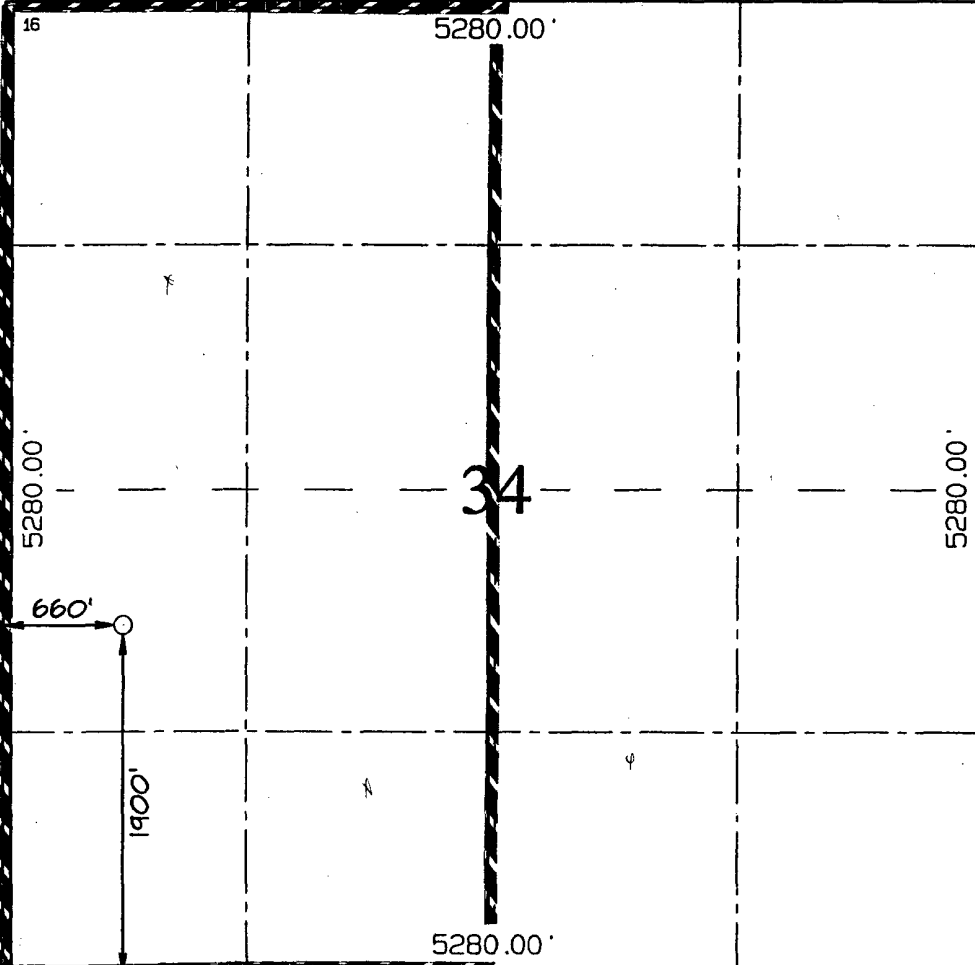


<sup>10</sup> Surface Location

UL or lot no. L	Section 34	Township 26N	Range 3W	Lot Idn	Feet from the 1900	North/South line SOUTH	Feet from the 660	East/West line WEST	County RIO ARriba
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<sup>11</sup> Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
<sup>12</sup> Dedicated Acres 320.0 Acres - (W/2)					<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> Order No.		

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED  
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

	<sup>17</sup> OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief   Signature Don Graham Printed Name Production Superintendent Title Date 12-16-03
	<sup>18</sup> SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief. Date of Survey: JULY 29, 2003 Signature and Seal of Professional Surveyor  JASON C. EDWARDS Certificate Number 15269

ACCESS  
1100' (0-8%)



## OPERATIONS PLAN

WELL NAME: Jicarilla 117E #3B

LOCATION: 1900' FSL, 660' FWL, Section 34, T26N, R3W, Rio Arriba, New Mexico

FIELD: Blanco Mesaverde

ELEVATION: 7414'

### FORMATION TOPS:

Surface	San Jose ✓	Huerfanito Benonite	4421
Nacimiento ✓	2536	Cliff House	5651
Ojo Alamo ✓	3696	Menefee	5751
Kirtland ✓	3751	Point Lookout	6121
Fruitland	3811	Mancos Shale	6376
Pictured Cliffs	4001		
Lewis	4146		
		<b>Total Depth</b>	<b>6571</b>

### LOGGING PROGRAM:

Open Hole Logs:

Surface to intermediate: NONE

Inter TD to total depth: None

Mud Logs: None

Coring: None

Natural Gauges: Every 500' from intermediate TD to total depth

MUD PROGRAM: Fresh water low solids mud from surface to intermediate TD (9.0 – 9.2 PPG).  
Air/mist from intermediate casing point to total depth.

### CASING PROGRAM:

<u>HOLE SIZE</u>	<u>DEPTH</u>	<u>CSG SIZE</u>	<u>WT.</u>	<u>GRADE</u>
12-1/4"	200'	9-5/8"	32.3#	H-40 ST&C
8-3/4"	4346'	7"	20 & 23#	J-55 ST&C
6-1/4"	4196'-6571'	4-1/2"	10.5#	J-55 ST&C

### TUBING PROGRAM:

6500'	2 3/8	4.7#	J-55
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WELLHEAD: 11" 3000 x 9 5/8" casing head. 11" 3000 x 7 1/16" 3000 xmas tree.

### BOP SPECIFICATIONS:

An 11" 2000 psi minimum double gate BOP stack (Figure 1) will be used following nipple up of casing head. During air drilling operations, a Shaffer Type 50 or equivalent rotating head will be installed on top of the stack. A 2" nominal, 2000 psi minimum choke manifold will be used. An upper Kelly Cock valve with handle available and drill string valve to fit each drill string will be available on the rig floor during drilling operations.

CEMENTING:

9 5/8 surface casing - Cement with 110 sxs Class B Cement with 1/4" Flocele/sx and 2% calcium chloride (130 cu. ft. of slurry, 100% excess to circulate to surface). WOC 12 hrs. Test casing to 600# for 30 minutes.

Texas Pattern Guide Shoe on bottom with centralizers on the first three joints.

7" intermediate casing - cement with 580 sxs 65/35 Class B Poz with 6% gel, 2% calcium chloride, 10% gilsonite, and 1/4# flocele/sk. Tail with 100 sxs Class B w/2% calcium chloride, 10% gilsonite and 1/4# flocele/sk. (1241 cu. Ft. of slurry, 90% excess to circulate to surface). WOC 12 hrs. If cement does not circulate, run temperature survey in 8 hrs. to determine TOC. Test casing to 1200 psi for 30 minutes.

Cement nose guide shoe on bottom with a self-fill insert float valve on top of shoe joint. 8 bow spring centralizers spaced every 2nd joint off bottom. Two turbolating centralizers at the base of the Ojo Alamo.

4 1/2 Production Liner

Cement with 370 sxs 50/50 poz with 2% gel, 5 PPS gilsonite, .4% halad - 9 and 1/4# flocele/sk ( 466 cu. Ft., 90% excess to intermediate casing). WOC 18 hrs prior to completion.

Cement nose guide shoe on bottom with float collar on top of shoe joint. Liner hanger will have a neopreme packoff on top.

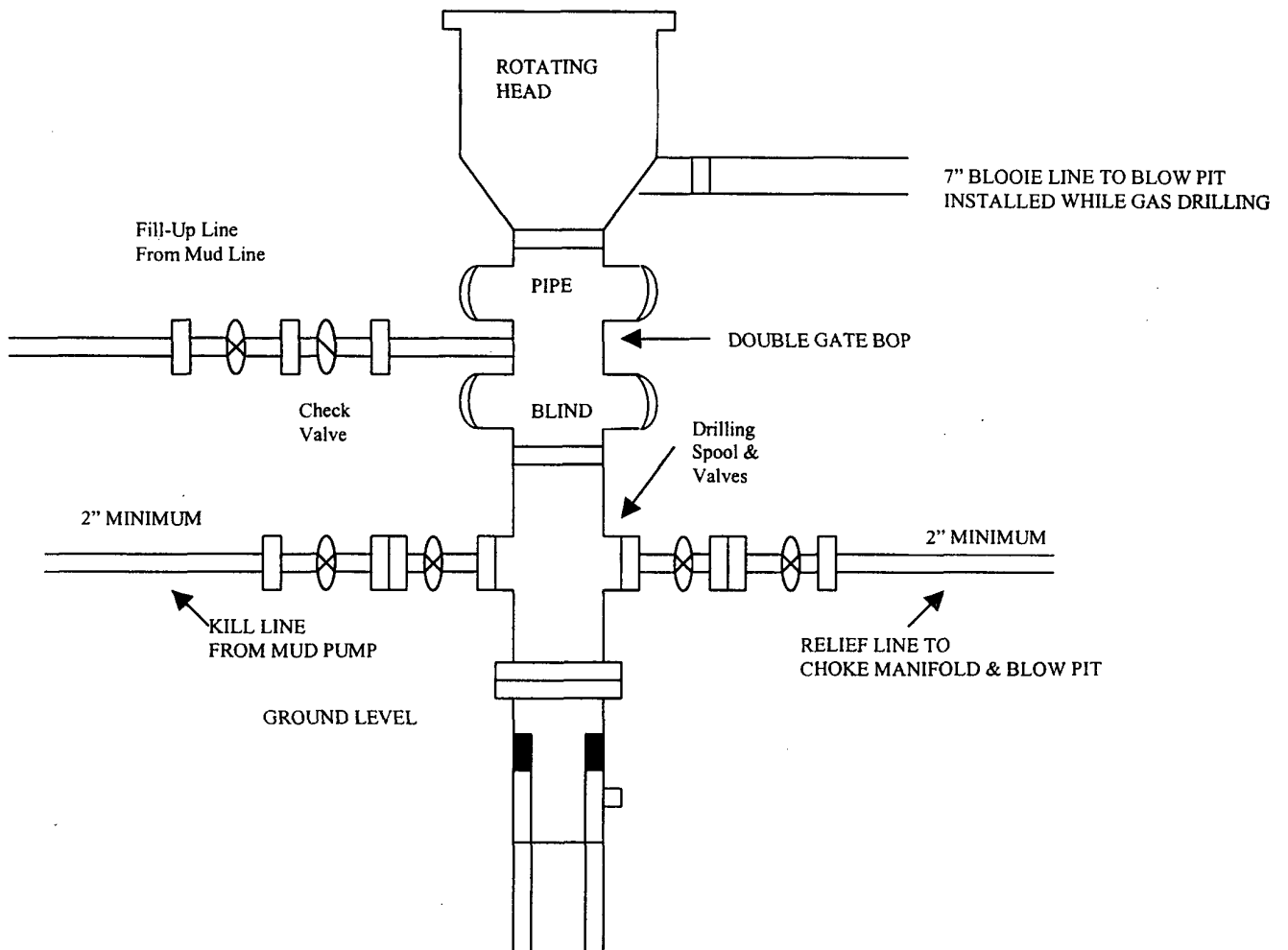
OTHER INFORMATION:

- 1) The Blanco Mesaverde and Gallup Dakota will be completed and downhole commingled.
- 2) No abnormal temperatures or pressures are anticipated.
- 3) Anticipated pore pressure for the Mesa Verde is 800, Pictured Cliffs is 500 and the Fruitland 400 psi.
- 4) If lost circulation is encountered, sufficient LCM will be added to the mud system to maintain well control.
- 5) This gas is dedicated.

# ENERGEN RESOURCES CORPORATION

## Mesa Verde / Dakota Well

### BOP Configuration

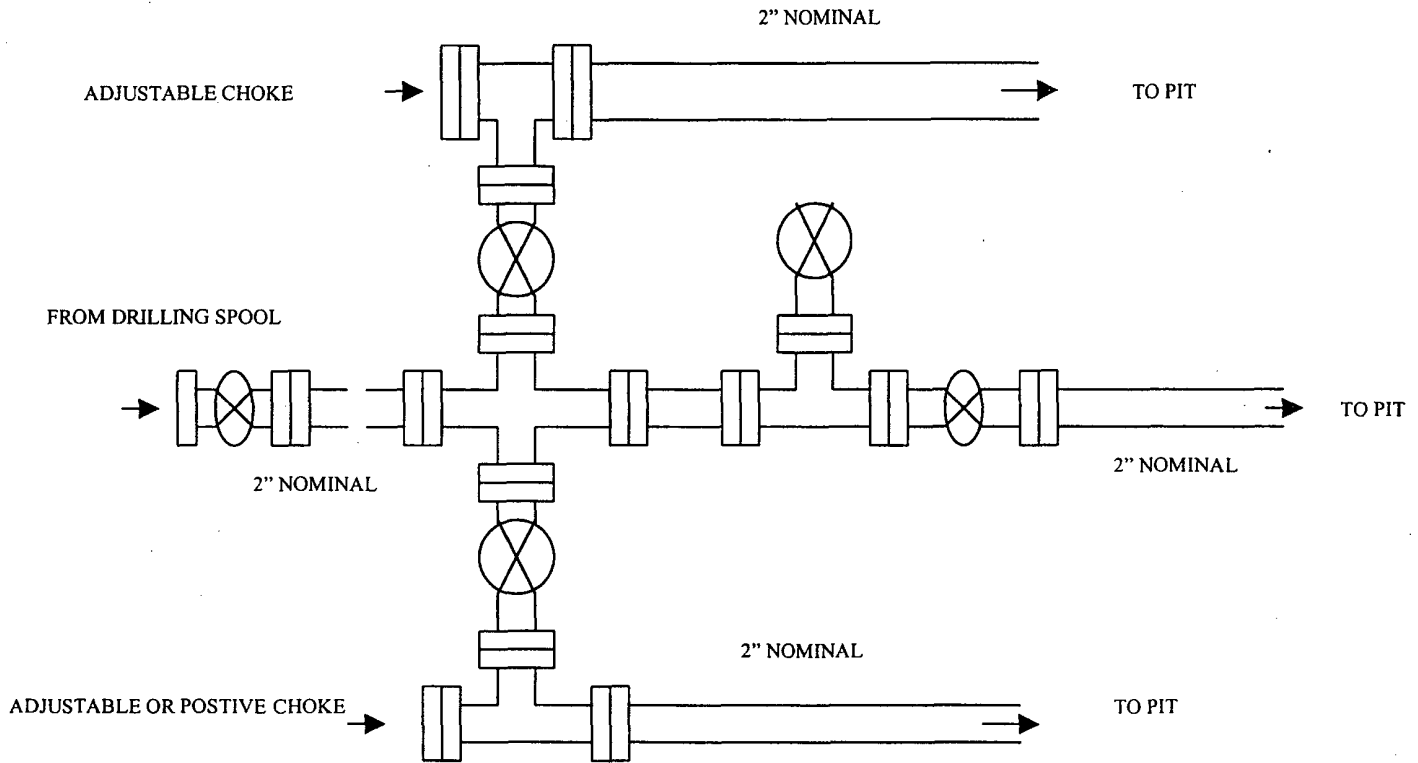


Minimum BOP installation for a Mesaverde well from Surface to Total Depth. 11' Bore, 2000 psi minimum working pressure double Gate BOP to be equipped with blind and pipe rams. A Schaffer Type 50 or equivalent rotating head to be installed on the top of The BOP. All equipment is 2000 psi working pressure or greater.

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# ENERGEN RESOURCES CORPORATION

## Choke Manifold Configuration 2M psi System



Minimum choke manifold installation from surface to Total Depth.  
2" minimum, 2000 psi working pressure equipment with two chokes.